CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

Information About Bovine Tuberculosis

July 2008

BOVINE TB: THE DISEASE

- Tuberculosis (TB) is a bacterial disease caused by a Mycobacterium species that usually infects the respiratory system.
- Bovine TB is caused by a germ called *Mycobacterium bovis,* which is very similar to the agent that causes TB in humans.
- Bovine TB is a zoonotic disease (a disease transmitted between humans and animals under natural conditions) and can infect most mammals including humans.
- Animals infected with TB may not show clinical signs for years, if ever.
- Infected animals may exhibit weight loss and decline of general health.
- Clinical signs include: cough, production loss, rough hair coat, chronic weight loss, variable appetite and fluctuating fevers.
- Bovine TB spreads in droplets coughed or sneezed into the air, or by consumption of contaminated water, feed or milk.
- Most cases of bovine TB in cattle are spread by contact with previously infected cattle.
- Cattle can be infected by eating feed or water contaminated with sputum, urine or feces from any bovine TB infected animal, but respiratory spread is more common.
- Humans most commonly become infected with bovine TB by drinking raw milk or eating unpasteurized cheese from infected cattle.
- The bacterium causing TB is killed when meat is cooked and milk is pasteurized.

SURVEILLANCE

- The primary surveillance method for TB in cattle is slaughterhouse surveillance of all cattle processed and submission of suspicious lymph node lesions.
- All carcasses are carefully inspected and, if infected, are rejected from the human food chain.
- Lesions in cattle typically involve the respiratory lymph nodes and the lungs when the route of infection is inhalation. Lesions in intestinal lymph nodes are typically seen when the route of transmision is ingestion of the TB bacteria.
- Any lesion suspected of being caused by *M. bovis* is sent to an approved laboratory for further evaluation.

- Live cattle are tested for TB using a skin test, the Caudal Fold Tuberculin (CFT) test, like the test done in people. Testing is a time consuming, multistep process requiring planning and coordination. Accredited private veterinarians perform the CFT test, and cattle responding to this test require confirmatory tests performed by regulatory veterinarians of the California Department of Food and Agriculture or the United States Department of Agriculture (USDA). Confirmatory tests are the comparative cervical tuberculin (CCT) test and the gamma interferon blood test. Animals positive to either of these tests are depopulated and examined post-mortem. Until all tests are complete, all cattle are under quarantine on the premises.

- Cattle may have a positive skin test for TB when they are not actually infected with bovine TB (false positives). A 1-5% false positive rate is expected due to cross-reactions with other mycobacteria.

- After a cow is exposed to infection it can take a few months before it tests positive; test response depends on the immune status of animal, dose of organism, route of exposure, and the type and application of the TB test (which is about 85% sensitive). Some infected animals will test negative.

- The cost of the skin test is variable and depends on the veterinary charges for the two visits and the number of animals tested.

USDA STATE STATUS

- The USDA has five classification categories for bovine TB: accredited-free, modified accredited advanced (MAA), modified accredited, accredited preparatory, and non-accredited.

- States not TB Free include Michigan, Minnesota, and New Mexico.

- California regained its TB Accredited-Free Status in April 2005, two years after the last of three bovine TB-affected central valley dairy herds was depopulated.

- A state loses its' free status if more than one herd is affected within four years (48 months), or if an affected herd is not depopulated.

- After a state loses its Free status it takes a minimum of two years after depopulating the last affected herd (if all herds are depopulated) OR two years after releasing the quarantine on the last affected herd, before the state is eligible to regain TB-Free status.

- After an infected herd is depopulated, it can re-stock after a six-week waiting period after completion of required cleaning and disinfecting.

- Regionalization, or Split-State status, is a method in which the USDA recognizes different status regions within one state. Regionalization requests are made to the USDA/APHIS administrator, and a USDA team reviews the request to ensure the state meets the 11 regionalization requirements of the Code Federal Regulations. Regionalization requests are difficult and may take several months to prepare. USDA staff makes the final decision after analyzing the risks associated with regionalizing the area.

REQUIREMENTS TO MOVE INTERSTATE FROM MODIFIED ACCREDITED ADVANCED (MAA) STATES (OR ZONES)

- Cattle that are infected with or exposed to TB may not move interstate.
- Some states may have more restrictive requirements – always call the state of destination when moving cattle interstate. Exceptions may be permitted for intact feeder heifers.
- Sexually intact cattle 6 months of age or older that originate in an MAA state require a negative TB test within 60 days to move interstate.
- Beef breeding herds moving interstate for grazing purposes may be permitted to move with an agreement to TB test all sexually intact cattle 6 months of age and over within 12 months of the agreement. The test may be acceptable for a three (3) year period after meeting specific requirements.
- No testing required for cattle under 6 months of age.

HOW PRODUCERS CAN REDUCE THE RISK OF TB ENTERING THEIR CATTLE

- Maintain a closed herd, if possible.
- Isolate and test purchased additions.
- Isolate and test cattle re-entering the herd (i.e. contract-raised heifers).
- Enhance and enforce premises biosecurity to prevent contact with cattle of unknown TB status.
- Raise replacement heifers in areas kept entirely separate from feeder cattle and cattle of Mexican origin.
- Prevent commingling of replacement heifers with feeder cattle, including in the sick pen.
- Have diagnostic workups of suspicious sick or dead animals performed using services of your veterinarian and the California Animal Health and Food Safety Services Laboratory System.
- Establish a TB screening policy for employees as part of the overall occupational health and safety program.
- Enhance disease tracing by recording individual animal identification and maintaining accurate records.

CDFA Animal Health Branch Offices	
Sacramento (HQ)	**916-654-1447**
Modesto	**209-491-9350**
Ontario	**909-947-4462**
Redding	**530-225-2140**
Tulare	**559-685-3500**
TB Task Force - Main Line:	**559-271-3600**
USDA/APHIS/VS 916-854-3950 or 877-741-3690	